

Chemical Analysis Report

SE-DIST-2018-12-07-01

Florida Department of Environmental Protection
Central Laboratory
2600 Blair Stone Road
Tallahassee, FL 32399-2400
DOH Accreditation E31780

Event Description: **SMP- North Lakes**
Request ID: **RQ-2018-12-03-19**
Customer: **SE-DIST**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
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2199 South Rock Road
Fort Pierce, FL 34945
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Certified by: Liang Lin, Environmental Administrator

Date Certified: 27-DEC-2018 11:36

A handwritten signature in black ink, appearing to read "Liang Lin", is shown on a light-colored background.

Case Narrative

Unless otherwise noted, all samples included in this report were received in accordance with protocols referenced in Chapter 62-160, Florida Administrative Code (F.A.C.). Results published in this report pertain only to the samples as submitted to, and received by the laboratory. All times in this report are adjusted to the applicable Eastern Time Zone (EST or EDT).

Results for the following analytical group are included in this report: Nutrients.

Scientific notation may be used in reporting very large or small values. Values reported using scientific notation will take the form of the following example: 1.3E+03, which is equivalent to 1.3×10^3 or 1300.

Unless otherwise noted, analytical values for soil and sediment samples are reported on a dry weight basis, and analytical values for waste and tissue samples are reported on a wet weight basis.

Results for TNI accredited tests met requirements established by The NELAC Institute. A double asterisk (**) is used to indicate an analyte/matrix/method for which the laboratory is not TNI accredited or where accreditation for that field of testing is not applicable.

Any significant anomalies or deviations from established protocols are documented in Non-Conformance Reports, which, where appropriate, are included within this analytical report. Additional comments related to specific analytical tests may be included as remarks following the analytical results for each sample. Such comments and remarks are for informational purposes only and are not intended to convey judgement about the usability of the reported data.

A quality control report on the performance of the test method for the submitted samples is included. Uncertainty associated with the analytical results contained in this report can be estimated from the reported quality assurance results and from published quality control acceptance limits for each analytical test. Matrix quality control results (matrix spike recoveries and matrix sample precision) pertain only to the matrix sample tested and do not necessarily reflect test method performance for other samples.

Typical matrix quality control (QC) measurements may include matrix spike recovery, matrix spike duplicate recovery, matrix spike precision and matrix sample precision. Not all matrix QC results may be available or reportable; where they are not an explanation is provided. Typical reasons for unavailable QC results include, but are not limited to, a) insufficient matrix sample to perform some or all QC measurements; b) analyte concentration in the sample replicated was too low for a meaningful measurement of precision and c) analyte concentration in the matrix sample spiked was too high (relative to the amount of analyte spiked) for a meaningful measurement of recovery. Where matrix QC results are unavailable, other method performance metrics (e.g., LCS recovery, LCS precision, surrogate recovery) may be used to assess performance of the method. Comments explaining any missing QC measurements are not intended to convey any adverse conclusions about the quality of the reported data.

Precision is reported as relative percent difference unless otherwise noted.

Quality Control codes as defined below may be used in this report to indicate results that are associated with one or more quality control elements which did not fall within established test method criteria. Such results may be qualified as estimates using a J qualifier as required by 62-160 F.A.C. Explanations are included in the report for any results that were reported as estimates for other reasons.

QC Codes used in this report may include:

- LCS – Recovery for the batch Laboratory Control Sample (LCS) was outside existing control limits;
- MS – Recovery for the batch matrix spike (MS) was outside existing control limits;
- CCV – Recovery for a continuing calibration verification (CCV) standard was outside existing control limits;
- SUR – Recovery of a surrogate (SUR) for associated analytes was outside existing control limits;
- RPD – The precision, measured as relative percent difference (RPD), of batch replicate measurements was outside existing control limits;
- RSD – The precision, measured as relative standard deviation (RSD), of batch replicate measurements was outside existing control limits;
- SMP – Sample - used precision derived from replicate analyses of a sample;

The following data qualifiers are used, where applicable, in this report as specified in 62-160 F.A.C.

- A - Value reported is the mean of two or more determinations.
- B - Results based on colony counts outside the acceptable range.
- I - The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.
- J - Estimated value and/or the analysis did not meet established quality control criteria.
- K - Actual value is known to be less than value given.
- L - Actual value is known to be greater than value given.
- N - Presumptive evidence of presence of material.
- O - Sampled, but analysis lost or not performed.
- Q - Sample held beyond normal holding time.
- T - Value reported is less than the criterion of detection.
- U - Material was analyzed for but not detected. The reported value is the method detection limit for the sample analyzed.
- V - Analyte was detected in both sample and method blank.
- X - Too few individuals to calculate SCI value.
- Y - The laboratory analysis was from an unpreserved or improperly preserved sample. The data may not be accurate.
- Z - Colonies were too numerous to count (TNTC).

Quality control information from overflow laboratories may not be included in this report. Please refer to the associated report from the overflow laboratory for additional information.

Sample Location: Henderson Pond

Collection Date/Time: 12/06/2018 12:00

Field ID: G2SE0010

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2047198	EPA 180.1 Rev. 2.0	Turbidity	2.4		NTU	P355843	
	EPA 300.0 Rev. 2.1	Chloride	41		mg Cl/L	P356074	
		Sulfate	2.7		mg SO4/L	P356076	
	SM 2120 B	Color (true)	100	A	PCU	P355849	
	SM 2320 B-97	Total Alkalinity	10		mg CaCO3/L	P355947	
	SM 2540 C-97	TDS	132		mg/L	P356306	
	SM 2540 D-97	TSS	5	I	mg/L	P356082	
	SM 4500 F-C-97	Fluoride	0.055	I	mg F/L	P355950	
	EPA 350.1 Rev. 2.0	Ammonia-N	0.056		mg N/L	P355970	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.2		mg N/L	P356225	
2047199	EPA 353.2 Rev. 2.0	NO2NO3-N	0.027		mg N/L	P355927	
	EPA 365.1 Rev. 2.0	Total-P	0.017		mg P/L	P355994	
	SM 5310 B-00	Organic Carbon	19		mg C/L	P355979	
	EPA 365.1 Rev. 2.0	O-Phosphate-P	0.004	U	mg P/L	P355846	
2047200	SM 5310 B-00	Organic Carbon	19		mg C/L	P355979	

Ref. Method and Comment:

SM 2540 D-97: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

Sample Location: Lake Eden

Collection Date/Time: 12/06/2018 12:30

Field ID: G2SE0014

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2047195	EPA 180.1 Rev. 2.0	Turbidity	0.80		NTU	P355843	
	EPA 300.0 Rev. 2.1	Chloride	39		mg Cl/L	P356074	
		Sulfate	2.3		mg SO4/L	P356076	
	SM 2120 B	Color (true)	130		PCU	P355849	
	SM 2320 B-97	Total Alkalinity	16		mg CaCO3/L	P355947	
	SM 2540 C-97	TDS	129		mg/L	P356306	
	SM 2540 D-97	TSS	2	I	mg/L	P356082	
	SM 4500 F-C-97	Fluoride	0.059	I	mg F/L	P355950	
	EPA 350.1 Rev. 2.0	Ammonia-N	0.054		mg N/L	P355970	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.0		mg N/L	P356225	
2047196	EPA 353.2 Rev. 2.0	NO2NO3-N	0.070		mg N/L	P355927	
	EPA 365.1 Rev. 2.0	Total-P	0.035		mg P/L	P355994	
	SM 5310 B-00	Organic Carbon	18		mg C/L	P355979	
	EPA 365.1 Rev. 2.0	O-Phosphate-P	0.019		mg P/L	P355846	
	dissolved						
2047197	EPA 365.1 Rev. 2.0	O-Phosphate-P	0.019		mg P/L	P355846	

Ref. Method and Comment:

SM 2540 D-97: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

Quality Assurance Report Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P355843

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P356074

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P356076

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P355970

Component	Result	Code	Units
Ammonia-N	0.002	U	mg N/L

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P356225

Component	Result	Code	Units
Kjeldahl Nitrogen	0.080	U	mg N/L

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P355927

Component	Result	Code	Units
NO2NO3-N	0.004	U	mg N/L

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P355994

Component	Result	Code	Units
Total-P	0.002	U	mg P/L

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P355846

Component	Result	Code	Units
O-Phosphate-P	0.004	U	mg P/L

Reference Method: SM 2120 B
Batch ID: P355849

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Quality Assurance Report

Method Blank Results

Reference Method: SM 2320 B-97
Batch ID: P355947

Component	Result	Code	Units
Total Alkalinity	0.65	U	mg CaCO ₃ /L

Reference Method: SM 2540 C-97
Batch ID: P356306

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P356082

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-97
Batch ID: P355950

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-00
Batch ID: P355979

Component	Result	Code	Units
Organic Carbon	0.50	U	mg C/L

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P356074

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chloride	107		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P356076

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sulfate	105		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P355970

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	96.9		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P356225

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	102		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P355927

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO2NO3-N	100		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P355994

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total-P	105		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P355846

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
O-Phosphate-P	95.9		P	90 - 110

Reference Method: SM 2120 B
Batch ID: P355849

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	99.6		P	90 - 110

Reference Method: SM 2320 B-97
Batch ID: P355947

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	101		P	98 - 107

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: SM 4500 F-C-97
Batch ID: P355950

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	99.4		P	91 - 105

Reference Method: SM 5310 B-00
Batch ID: P355979

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	92.7		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P356074

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2047126	Chloride	106		P	90 - 110
2047188	Chloride	105		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P356076

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2047126	Sulfate	102		P	90 - 110
2047188	Sulfate	105		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P355970

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2047218	Ammonia-N	97.6	98.4	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P356225

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2047196	Kjeldahl Nitrogen	92.2	100	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P355927

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2047189	NO2NO3-N	99.4	102	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P355994

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2047138	Total-P	104	99.7	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P355846

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2047145	O-Phosphate-P	93.0	96.3	P/P	90 - 110

Reference Method: SM 4500 F-C-97
Batch ID: P355950

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2047124	Fluoride	102	101	P/P	91 - 105

Reference Method: SM 5310 B-00
Batch ID: P355979

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2047132	Organic Carbon	95.8	95.0	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P355843

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2047174	Turbidity	2.17	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P356074

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2047126	Chloride	0.976	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P356076

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2047126	Sulfate	1.72	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P355970

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2047218	Ammonia-N	0.581	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P356225

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2047196	Kjeldahl Nitrogen	4.49	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P355927

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2047189	NO2NO3-N	2.31	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P355994

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2047138	Total-P	3.76	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P355846

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2047145	O-Phosphate-P	2.89	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: SM 2120 B
 Batch ID: P355849

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2047198	Color (true)	1.02	Sample	P	0 - 20

Reference Method: SM 2320 B-97
 Batch ID: P355947

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2047124	Total Alkalinity	0.0475	Sample	P	0 - 1.6

Reference Method: SM 2540 C-97
 Batch ID: P356306

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2047421	TDS	4.18	Sample	P	0 - 10

Reference Method: SM 4500 F-C-97
 Batch ID: P355950

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2047124	Fluoride	0.979	Spike	P	0 - 3.5

Reference Method: SM 5310 B-00
 Batch ID: P355979

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2047132	Organic Carbon	0.734	Spike	P	0 - 20

* Sample, spike and/or laboratory control sample precision (LCS) is reported.
 Replicate spike precision may be reported when sample results are below quantifiable levels.

Quality Assurance Report Calibration Verification

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A88234

Included Lab Sample IDs: 2047195, 2047198

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	100	100	P/P	95 - 105

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A88235

Included Lab Sample IDs: 2047197, 2047200

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	97.7	97.8	P/P	90 - 110

Reference Method: SM 2120 B

Run ID: A88236

Included Lab Sample IDs: 2047195, 2047198

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	100	99.9	P/P	85 - 115

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A88269

Included Lab Sample IDs: 2047196, 2047199

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	100	100	P/P	90 - 110

Reference Method: SM 2320 B-97

Run ID: A88275

Included Lab Sample IDs: 2047195, 2047198

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	99.0	102	P/P	90 - 110

Reference Method: SM 4500 F-C-97

Run ID: A88275

Included Lab Sample IDs: 2047195, 2047198

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	101	101	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A88285

Included Lab Sample IDs: 2047196, 2047199

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	97.6	99.4	P/P	90 - 110

Reference Method: SM 5310 B-00

Run ID: A88287

Included Lab Sample IDs: 2047196, 2047199

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	96.0	94.7	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A88324

Included Lab Sample IDs: 2047195, 2047198

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	102	102	P/P	90 - 110
Sulfate	101	102	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A88362

Included Lab Sample IDs: 2047196, 2047199

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	100	100	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A88412

Included Lab Sample IDs: 2047196, 2047199

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	105	108	P/P	90 - 110

* Pass/Fail determinations are made for each bracketing calibration verification check.

Control limits for initial calibration checks may be different from those for continuing checks, depending on method requirements.

Where they are different, both control limits are provided.

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		LCS	Precision	MS
						SMP	
EPA 180.1 Rev. 2.0	Turbidity					2.17	
EPA 300.0 Rev. 2.1	Chloride	107	106	105		0.976	
	Sulfate	105	102	105		1.72	
EPA 350.1 Rev. 2.0	Ammonia-N	96.9	97.6	98.4			0.581
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	102	92.2	100			4.49
EPA 353.2 Rev. 2.0	NO ₂ NO ₃ -N	100	99.4	102			2.31
EPA 365.1 Rev. 2.0	Total-P	105	104	99.7			3.76
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	95.9	93.0	96.3			2.89
SM 2120 B	Color (true)	99.6				1.02	
SM 2320 B-97	Total Alkalinity	101				0.0475	
SM 2540 C-97	TDS					4.18	
SM 4500 F-C-97	Fluoride	99.4	102	101			0.979
SM 5310 B-00	Organic Carbon	92.7	95.8	95.0			0.734

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	2047195, 2047198
EPA 300.0 Rev. 2.1 / E31780	Chloride in aqueous matrices	2047195, 2047198
EPA 300.0 Rev. 2.1 / E31780	Sulfate in aqueous matrices	2047195, 2047198
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	2047196, 2047199
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	2047196, 2047199
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	2047196, 2047199
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	2047196, 2047199
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2047197, 2047200
SM 2120 B / E31780	True Color measured at 450 nm	2047195, 2047198
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO ₃ /L	2047195, 2047198
SM 2540 C-97 / E31780	Total Dissolved Solids in aqueous matrices	2047195, 2047198
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2047195, 2047198
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2047195, 2047198
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	2047196, 2047199

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
EPA 180.1 Rev. 2.0	12/07/2018			12/07/2018 16:13	Megan Treadwell	2047195, 2047198
EPA 300.0 Rev. 2.1	12/07/2018			12/13/2018 04:27	Lipi Saha	2047195
	12/07/2018			12/13/2018 04:39	Lipi Saha	2047198
EPA 350.1 Rev. 2.0	12/07/2018			12/11/2018 14:20	Ping Hua	2047196
	12/07/2018			12/11/2018 14:21	Ping Hua	2047199
EPA 351.2 Rev. 2.0	12/07/2018	12/14/2018 12:30	Adrian Shelby	12/18/2018 10:12	Chelsea Hernandez	2047196
	12/07/2018	12/14/2018 12:30	Adrian Shelby	12/18/2018 10:17	Chelsea Hernandez	2047199
EPA 353.2 Rev. 2.0	12/07/2018			12/11/2018 11:00	Beverly Y. Sanders	2047196
	12/07/2018			12/11/2018 11:01	Beverly Y. Sanders	2047199
EPA 365.1 Rev. 2.0	12/07/2018	12/12/2018 11:00	Sima Feizi	12/14/2018 15:04	Beverly Y. Sanders	2047196
	12/07/2018	12/12/2018 11:00	Sima Feizi	12/14/2018 15:05	Beverly Y. Sanders	2047199
EPA 365.1 Rev. 2.0 dissolved	12/07/2018			12/07/2018 16:01	Jhamieka S. Greenwood	2047197
	12/07/2018			12/07/2018 16:02	Jhamieka S. Greenwood	2047200
SM 2120 B	12/07/2018			12/07/2018 16:01	Chelsea Hernandez	2047195
	12/07/2018			12/07/2018 16:03	Chelsea Hernandez	2047198
SM 2320 B-97	12/07/2018			12/11/2018 08:19	Lauren Bottorf	2047195
	12/07/2018			12/11/2018 08:30	Lauren Bottorf	2047198
SM 2540 C-97	12/07/2018			12/11/2018 16:05	Yijie Li	2047195, 2047198
SM 2540 D-97	12/07/2018			12/11/2018 16:05	Yijie Li	2047195, 2047198
SM 4500 F-C-97	12/07/2018			12/11/2018 08:19	Lauren Bottorf	2047195
	12/07/2018			12/11/2018 08:30	Lauren Bottorf	2047198
SM 5310 B-00	12/07/2018			12/11/2018 19:39	Megan Treadwell	2047196
	12/07/2018			12/11/2018 19:52	Megan Treadwell	2047199